

LINEAR

1) Write the equation of the linear function

x	y
-2	-2
0	4
1	7

2) Write the equation of the linear function through $(0, 10)$ and $(2, -1)$

Linear Applications:

3 I need to order T-shirts for the gymnastics team. The company charges \$10 to set up the screen print and then \$7.95 for each shirt. If the team's order was \$129.25 in total, how many T-shirts did I order?

4 Julie runs her Etsy shop and looks at orders at the start of each week. The number of orders that she has left to make at the end of each day can be estimated with the equation $P = 35 - 5d$, where P is the number of products left to make and d is the number of days she has worked that week.

A. What is the meaning of the value of 35 in this equation?

B. What is the meaning of the value of 5 in this equation?

5 A company uses the formula $P = 30n - 270$ to calculate their monthly profit where P is the profit and n is the number of games sold. How many games does the company need to sell to make a profit of \$300 this month?

Linear Systems:

$$\begin{aligned} p &= 2.1 + 0.25x \\ c &= 3 + 0.1x \end{aligned}$$

In the equations, p represents the price per pound, in dollars of peanuts and cashews, respectively, x weeks after January 1. What was the price per pound of peanuts when it was equal to the price per pound of cashews?

7 A school sold 105 tickets for the spring fling. Adult tickets cost \$7 and student tickets cost \$5.5, and the total revenue was \$630.

Write a system of equations to represent this

8. Graph $y = \frac{1}{3}x + 2$

9. Graph $y - 3 = 2(x + 1)$

10. Graph
 $3x + 4y = 12$

FACTOR

1) $x^2 - 9x + 20$

2) Factor + simplify

$$\frac{x^2 + 6x + 5}{x^2 - 3x - 4}$$

3) $3x^2 + 11x - 4$

4) $2x^2 + 20x + 42$

5) $12xy^2 - 4x^2y$

6) $a^3 - 4a^2 + 3a - 12$

7) $25n^2 - 144$

i

"The principle goal of
create men who are co
new things, not simply
what other generation
men who are creative,
discoverers"

Jean Piaget

1) $(7+i)(4-2i)$

2) $\sqrt{-49}$


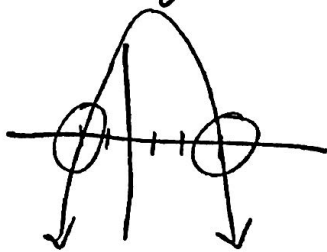
3) What is the sum of $10+3i$ and $5-7i$?

4) What is the value of x in $\sqrt{10-3x} + 2i$?

5) Find $g(3i)$ if $g(x) = x^2$

6) Solve $x^2 + 25 = 0$

QUADRATICS

- 1) Graph $y = 3(x-4)^2 - 2$
- 2) Find the vertex of A. $y = -2(x+4)^2 - 1$ B. $y = x^2 - 8x + 3$
- 3) Find the solutions of $y = x^2 - 8x - 20$ 
- 4) Find the solutions of $y = 3x^2 + 8x - 7$
- 5) Find the y-intercept of $y = 2x^2 - 12x + 5$
- 6) Find the solutions of 
- 7) Describe the transformations of A. $y = -4(x+1)^2 - 3$
B. $y = \frac{1}{4}x^2 + 6$
- 8) If an object falling is modeled by $h = -9.8t^2 + 500$
where t is seconds, what is the height of the object after 2 sec?

EXP

1)

Solve the following $x+4$ $3x-2$

A. $2^{3x-5} = 16$ B. $7^x = 7^{3x-2}$

2) $5^{-1} =$ $8^0 =$

3) Graph $y = 2 \cdot 3^x$

4) Write an equation for each:

A.

x	y
-1	2.3
0	7
1	21

B. Through $(0, -4)$ and $(1, -12)$

5) Which is increasing the fastest?

A. $y = 10 \cdot 2^x$ B. $y = 4 \cdot 8^x$ C. $y = 30 \cdot \frac{1}{2}^x$

6) A company with 10,000 gadgets is decreasing its supply by 10% each month. Write an eq. to model.

Growth or decay? A. $y = 5(0.7)^x$ B. $y = 2(5)^x$
C.

x	y
-1	2.3
0	7
1	21

LOGS

- 1) Rewrite in log form $5^3 = 125$
- 2) Rewrite in exponential form $\log_2 32 = 5$
- 3) Evaluate A. $\log_3 9$ B. $e^{\ln 15}$
- 4) Solve A. $\log_4 X = 3$ B. $\log_3 7 + \log_3 X = 6$
- 5) Rewrite as a single logarithm
A. $\log 5 + \log 4$ B. $\log 10 - \log 2$ C. $3 \log 2$